

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

New claims 10-18 have been added. Claims 1, 5, 8 and 9 have been amended. Claims 1-18 are pending in this application.

Claims 1, 5 and 8 stand objected to because of the informalities. In response, Applicant has amended 1, 5 and 8 according to the Examiner's kind suggestions. It is submitted that these claims are now in a proper format.

Claims 1-2 and 4-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants admitted prior art (hereinafter 'AAPA') in view of Nakao et al. Applicant traverses the rejection for the following reasons.

The claimed invention is directed to a method for fabricating a capacitor of a semiconductor device, including a step of forming an upper electrode constituted with a second metal layer, a poly-silicon layer and a first metal layer by patterning the second metal layer so that the second metal layer is connected to the first metal layer, as recited in claim 1, as amended. Applicant submits that AAPA and Nakao et al., either alone or in combination, fail to disclose or suggest the above feature of the claimed invention.

The Examiner's statement, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a second metal layer over the upper electrode of AAPA in order to form a diffusion barrier that allows for a higher breakdown voltage, is a mere articulation and provides no basis for the rejection. Simply, the Examiner's statement is irrelevant to the claimed invention. To the contrary of the purpose of Nakao et al., which is to allow a higher breakdown voltage, the purpose of the claimed invention is to provide the upper electrode having a low sheet resistance, thereby providing superior conductivity (see page 8, lines 10-17).

Further, according to AAPA, an interlayer insulating film 14 is formed on the polysilicon layer 13B. It is not clear how one would form a diffusion barrier layer on the polysilicon layer instead of the interlayer insulating film.

After all, Applicant submits that what the Examiner has done is selectively picking and choosing isolated elements from the prior art references in order to reconstruct the claimed invention, which is not proper under in re Gordon, 221 USPQ 1125 (Fed. Cir. 1984). Applicant submits that there is no teaching or suggestion that the combination be made. The Examiner is invited to point out any passages in AAPA or Nakao et al. which teach or suggest the combination be made.

Even if these references could be combined in the manner suggested by the Examiner, the references still fail to disclose or suggest the feature of forming the second metal layer formed on the poly-silicon layer, wherein the second metal layer is connected to the first metal layer.

For all of the reasons set forth above, Applicant respectfully submits that claim 1 is not made obvious over AAPA in view of Nakao et al. Claims 2 and 4-9, which are dependent on claim 1, are patentable for the reasons discussed above with respect to claim 1, as well as on their own merits.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Nakao et al. in view of Wolf et al. Claims 4 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Nakao et al. in view of Yasaitis et al. Applicant traverses the rejection for the following reasons.

As set forth above, AAPA and Nakao et al., as combined, completely fail to disclose or suggest all of the features of the claimed invention. Wolf et al. and Yasaitis et al. do not supply the above-noted deficiencies of AAPA and Nakao et al. Therefore, Applicant submits that claims 3, 4 and 7, which are dependent on claim 1, are not made obvious over the references cited by the Examiner under 35 U.S.C. §103(a), for the same reasons discussed above with respect to claim 1.

Claims 1-2 and 4-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Kirlin et al. Applicant traverses the rejection for the reasons discussed below.

While Kirlin discloses a diffusion barrier material 120 contacting an upper electrode 116 as shown in fig. 8, Kirlin also fails to disclose or suggest the step of forming the upper electrode structure consists of a second metal layer, a polysilicon layer, and a first metal layer, wherein the second metal layer is electrically connected to the first metal layer, as recited in claim 1, as amended.

As to the Examiner's suggestion combining AAPA and Kirlin et al., it is not clear how one of ordinary skill in the art could combine the method of AAPA, which includes a step of forming an inter-layer insulating film on a polysilicon layer, and the method of Kirlin, which includes a step of forming diffusion barrier material 120 on the upper electrode 116. It is submitted that the Examiner has selectively picked and chosen isolated elements from the prior art references in order to reconstruct the claimed invention. In re Gordon, 221 USPQ 1125 (Fed. Cir. 1984).

In preceding before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of

obviousness based upon the prior art... "[The Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fine, 837 F.2d 1071, 1074, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988). The Examiner is cordially invited to show some objective teaching in the prior art.


For the reasons set forth above, Applicant respectfully submits that claim 1 is not made obvious over AAPA in view of Kirlin et al. under 35 U.S.C. §103(a). Claims 2 and 4-9, which are dependent on claim 1, are patentable for the reasons discussed above with respect claim 1, as well as on their own merits.

Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Kirlin et al. in view of Wolf et al. Claims 4 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA and Kirlin et al. in view of Yasaitis et al. Applicant submits that Wolf et al. and Yasatis et al. do not supply the above-noted deficiencies of Kirlin et al. and AAPA. Therefore, claims 3, 4 and 7, which are dependent on claim 1, are believed allowable for the same reasons discussed above with respect to claim 1.

New claim 10 recites a step of patterning a second metal layer to form an upper electrode consists of a patterned second metal layer, a patterned poly-silicon layer and a patterned first metal layer so that the patterned second metal layer is electrically connected to the patterned first metal layer. Applicant submits that this step is a similar step as the last step of amended claim 1. Accordingly, it is submitted that claim 10 and its dependent claims 11-18 are also patentable for the reasons discussed above with respect to claims 1-9.

All objections and rejections having been addressed, it is respectfully submitted that claims 1-18 are now in condition for allowance and a notice to that effect is earnestly solicited. If any issues remain to be resolved, the Examiner is cordially invited to telephone the undersigned attorney at the number listed below.

Respectfully submitted,
MAYER BROWN ROWE & MAW LLP

By: 
Yoon S. Ham
Reg. No. 45,307
Direct Tel.: (202) 263-3280

MAYER BROWN ROWE & MAW LLP
1909 K Street, NW
Washington, DC 20006-1101

Atty. Dkt.: **123037-05004982**
YH:jr